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Attorney Docket # 4925-9

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Jukka WALLENIUS et al.
Serial No.: 09/431,753
Filed: November 01, 1999
For: Timedependent Hyperlink System In Videocontent

Examiner: Mirza, Adnan M.
Group Art: 2152

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August 22, 2003
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APPEAL BRIEF

SIR:

This is an appeal, pursuant to 37 C.F.R. §1.192(a) from the decision of the Examiner in the above-identified application, as set forth in the Final Office Action wherein the Examiner finally rejected appellant's claims. The rejected claims are reproduced in the Appendix A attached hereto. A Notice of Appeal was filed on May 29, 2003. This Appeal Brief is being submitted in triplicate.

The fee of $320.00 for filing an Appeal Brief pursuant to 37 C.F.R. §1.17(f) is submitted herewith. Appellant requests a one-month Extension of Time of the original shortened statutory response period to file this Appeal Brief. A Petition for the one-month extension of time is enclosed herewith along with the fee of $110. Any additional fees or charges in connection with this application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

03/26/2003 AWONDAF1 00000036 09431753
01 FC:1402 320.00 OP
02/26/2003 AWONDAF1 00000036 09431753
02 FC:1251 110.00 OP

REAL PARTY IN INTEREST

The assignee, Nokia Networks Oy, of applicant, Jukka Wallenius, is the real party of interest in the above-identified U.S. Patent Application.

RELATED APPEALS AND INTERFERENCES

There are no other appeals and/or interferences related to the above-identified application at the present time.

STATUS OF CLAIMS

The application was filed with claims 1-68. Claim 34 was amended during examination by an amendment filed October 21, 2002. Claims 1-68 have been rejected in a final Office Action dated December 26, 2002. Claims 1-68 are on appeal.

STATUS OF AMENDMENTS

A response was filed on May 2, 2003 subsequent to the Final Office Action. In an Advisory Action dated May 14, 2003, the Examiner indicated that the response was considered but that the rejection of claims 1-68 is maintained.

SUMMARY OF THE INVENTION

Appellant's invention is directed to a system in which hyperlink information is associated with a video so that a user viewing the video may select a hyperlink in the video content (page 5, lines 2-4 of the specification). An example of the how the present invention may operate is disclosed on page 5, lines 10-14 and on page 13, line 17 to page 14, line 2, wherein a video shows a person walking from room to room and hyperlinks are associated with different pieces of furniture shown in the various rooms. The links may direct the user to a website containing information about the furniture (e.g., if the furniture is antique) and/or a site containing information about how to

purchase the furniture (page 5, lines 13-14). The hyperlink for each piece of furniture is selectable by selecting the area in which the furniture appears at the time the furniture appears in the video. Accordingly, the hyperlink for a chair is only selectable for the portion of time that the chair is displayed in the video (page 5, lines 12-13).

According to the method of the present invention, the hyperlinks are first associated with time and place coordinates in the video (page 10, lines 19-21). In the example given above, a hyperlink for a piece of furniture would be associated with the time and position coordinates at which the piece of furniture appears in the video. As a user views the video, the user may select one of the hyperlinks associated with the video. This selection by the user may be accomplished by selecting the area of the hyperlink using an input device 160 (page 9, lines 14-16).

While the video is playing, the existence of a link may be indicated to a viewer of the video in various ways such as, for example, by information indicating visually to the user the existence of a hyperlink, by a visual object pointing to the visual object associated with a hyperlink, or by displaying bounds of an object with an associated hyperlink (page 13, lines 1-7).

Upon selection of the hyperlink, a content reference in an electronic document associated with the selected hyperlink is determined based on the position and time coordinates selected (page 11, lines 3-5). Once the connection to the electronic document is established, the user's browser begins a session with the new link, i.e., the selected hyperlink which may comprise any type of electronic document (page 14, lines 3-9).

ISSUES

1. Whether claims 1-23, 25-33, 35-61 and 63-68 are patentable under 35 U.S.C. §102(a) over U.S. Patent No. 6,330,595 (Ullman)?

2. Whether claims 24, 62, and 34 are patentable under 35 U.S.C. §103 over U.S. Patent No. 6,330,595 (Ullman) in view of U.S. Patent No. 6,317,795 (Malkin)?

GROUPING OF CLAIMS

The pending claims are 1-68, of which claims 1 and 34 are independent. The claims are grouped as follows:

Group I -- claims 1-33, which stand or fall together.

Group II -- claims 34-68, which stand or fall together.

ARGUMENT

1. GROUP I (CLAIMS)

To anticipate a claim, a reference must disclose each and every element of the claim (*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). Independent claim 1 recites the steps of "associating content reference for at least one hyperlink with a video by associated the content reference with coordinates at which the hyperlink appears in the video, wherein one of the coordinates includes time" and "selecting by the user a selected hyperlink in the video by selecting coordinates at which the hyperlink appears in the video". Accordingly, independent claim requires that the hyperlink is associated a plural coordinates and that one of the plural coordinates is time. Furthermore, independent claim 1 requires that the user select coordinates (plural) at which the hyperlink appears.

Ullman discloses a system for integrating video programming with the information resources of the Internet. According to Ullman, a video program embedded with uniform resource locators (URLs) is received at a computer based system (col. 4, lines 45-49 in the Ullman reference). In col. 5, lines 7-12, Ullman discloses that the URLs have a time stamp to indicate when they should be displayed during the video program. As an alternative, Ullman also states in col. 5, lines 11-12, that a user may select when to call the particular web pages.

In the first case, the time stamps in Ullman are used to display the contents of the URLs on a user computer in synchronicity with the display of the video (col. 7, lines 43-51). That is, the associated links are automatically displayed when elapsed time of play of the video reaches the time stamp of the associated link. This embodiment of Ullman fails to teach or suggest the claimed invention because the URLs are associated with a time only, and not with

plural coordinates as expressly recited in independent claim 1. Furthermore, the user of Ullman does not select the URLs. Rather, the URLs are automatically displayed at certain times during the video (see e.g., col. 8, lines 19-24 and lines 38-67), as is also expressly recited in independent claim 1.

In the alternate embodiment of Ullman in which the user selects when to call particular web pages, Ullman discloses at col. 8, lines 24-37, that this is accomplished by using a control panel, separate from the video, which provides a list of URLs that have been received, thereby allowing the user to go back and retrieve web pages previously displayed. Since the control panel is provided in a region separate from the video from which the URLs are selected, this embodiment also fails to disclose that the hyperlink is associated with plural coordinates or that the user selects a hyperlink by selecting coordinates at which the selected hyperlink appears in the video, as expressly recited in independent claim 1.

The Examiner states in the office action that Ullman discloses the step of selecting by the user a selected hyperlink in the video by selecting coordinates at which the selected hyperlink appears in the video at col. 3, line 63 to col. 4 lines 44-54 (see page 2, section 2 of the final Office Action). However, this section of Ullman discloses that the URLs, i.e., hyperlinks, that are sent with the video or associated with the video may be personalized, by the content provider, for the intended audience. In the continuation sheet of section 5. of the Advisory Action, the Examiner states that this personalization feature taught by Ullman can be interpreted as coordinates selected by the user. Assuming arguendo that personalization features are selected by the user and are considered coordinates, these are not "coordinates at which the hyperlink appears in the video", as expressly recited in independent claim 1. This section of Ullman cited by the Examiner (col. 3, line 63 to col. 4, line 2) merely states that different hyperlinks can be sent to different people. This section of Ullman does not state that the users select the hyperlinks by selecting coordinates at which the hyperlinks appear in a video.

Accordingly, Ullman fails to disclose the step of "selecting by the user a selected hyperlink in the video by selecting coordinates at which the selected hyperlink appears in the video".

The Examiner further states that Ullman discloses selecting coordinates of a hyperlink in a video at col. 9, lines 9-24 (see page 8 of the final Office Action). However, it is respectfully submitted that this portion of Ullman also fails to disclose selecting the coordinates of a hyperlink from a video. This section of Ullman discloses an embodiment in which a web page is shown on a personal computer (PC) 16 and a video program is displayed on a television monitor 114 (see col. 9, lines 5-8). Both the television monitor 114 and the PC 16 receive the video program. The PC 16 extracts the URLs from the transmission (see col. 9, lines 8-13). It is clear that Ullman is discussing two separate media here, i.e., a web site and a video. At col. 9, line 16, Ullman states that the **web site** may have a hyperlink which the user can select to call up a television channel. That is, the user is selecting a hyperlink from a web page on the web site and is clearly not selecting a hyperlink from a video, as recited in independent claim 1 of the present invention.

For the foregoing reasons, it is respectfully submitted that Ullman fails to establish a *prima facie* case of anticipation with regard to the subject matter recited in claims 1-33. The Final Rejection of the claims in Group I should be reversed.

2. GROUP II (CLAIMS)

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.

Independent claims 34 is directed toward a system for processing a time-dependent hyperlink in a video and recites "at least one hyperlink and content reference cross-referenced with coordinates indicating where the at least one hyperlink appears in the video stored in said first content server, said coordinates including display position and time during the video, and said content reference indicating a second content server comprising an electronic document to which the hyperlink is linked" and "means for determining when said hyperlink is selected by determining when coordinates at which the hyperlink appears in the video are selected".

As described above with regard to the Group I claims, Ullman discloses a system for integrating video programming with the information resources of the Internet. According to

Ullman, a video program embedded with uniform resource locators (URLs) is received at a computer based system (col. 4, lines 45-49 in the Ullman reference). In col. 5, lines 7-12, Ullman discloses that the URLs have a time stamp to indicate when they should be displayed during the video program. As an alternative, Ullman also sates in col. 5, lines 11-12, that a user may select when to call the particular web pages.

In the first case, the time stamps in Ullman are used to display the contents of the URLs on a user computer in synchronicity with the display of the video (col. 7, lines 43-51). That is, the associated links are automatically displayed when the elapsed time of play of the video reaches the time stamp of the associated link. This embodiment of Ullman fails to teach or suggest the claimed invention because the URLs are associated with a time only, and not with display position as expressly recited in independent claim 34. Furthermore, the user of Ullman does not determine when URLs are selected by determining when coordinates at which the hyperlink appears in the video are selected. Rather, the URLs are automatically displayed at certain times during the video (see e.g., col. 8, lines 19-24 and lines 38-67).

In the alternate embodiment of Ullman in which the user selects when to call particular web pages, Ullman discloses at col. 8, lines 24-37, that this is accomplished by using a control panel, separate from the video, which provides a list of URLs that have been received, thereby allowing the user to go back and retrieve web pages previously displayed. Since the control panel is provided in a region separate from the video from which the URLs are selected, this embodiment also fails to disclose that the hyperlink is associated with plural coordinates or that the user selects a hyperlink by selecting coordinates at which the selected hyperlink appears in the video, as expressly recited in independent claim 34.

Accordingly, Ullman fails to teach or suggest the recitations "at least one hyperlink and content reference cross-referenced with coordinates indicating where the at least one hyperlink appears in the video stored in said first content server, said coordinates including display position and time during the video, and said content reference indicating a second content server comprising an electronic document to which the hyperlink is linked" and "means for determining when said hyperlink is selected by determining when coordinates at which the hyperlink appears in the video are selected", of independent claim 34.

Furthermore, Malkin fails to teach or suggest what Ullman lacks. Malkin is directed to a method for dynamic modification of multimedia content in which a portion of the video is masked. More specifically, Malkin teaches that an area of a video may covered by a fuzz ball track to cover objectional material such as nudity or violence (see col. 5, lines 13-16; col. 6, lines 5-19; col. 7, lines 21-67; and Fig. 3a). Accordingly, Malkin teaches identifying portions of a video, by time and location, that contain objectional material. However, Malkin fails to teach or suggest associating hyperlinks with these coordinates. In fact, Malkin has nothing to do with hyperlinks. Furthermore, Malkin teaches that a mask provider 155, 205 determines locations of objectional material. The user merely provides an indication of what level of masking is requested. Accordingly, there is no teaching or suggestion that the user selects specific coordinates in the video. Even if the teachings of Ullman and Malkin were combined, there is no teaching or suggestion for "at least one hyperlink and content reference cross-referenced with coordinates indicating where the at least one hyperlink appears in the video stored in said first content server, said coordinates including display position and time during the video, and said content reference indicating a second content server comprising an electronic document to which the hyperlink is linked" and "means for determining when said hyperlink is selected by determining when coordinates at which the hyperlink appears in the video are selected", as recited in independent claim 34.

In view of the above comments, it is respectfully submitted that independent claim 34 is allowable over Ullman in view of Malkin.

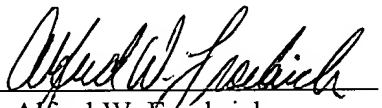
For the foregoing reasons, it is respectfully submitted that the combined teachings of fail to establish a *prima facie* case of obviousness with regard to the subject matter recited in claims 34-68. The Final Rejection of the claims in Group II should be reversed.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that appellant's appellants' claims are not rendered obvious anticipated by and are, therefore, patentable over the art of record, and the Examiner's rejections should be reversed.

Respectfully submitted,

COHEN, PONTANI, LIEBERMAN & PAVANE

By 

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APPENDIX

1. (original) A procedure for using a time-dependent hyperlink in video, comprising the steps of:

(a) associating content reference for at least one hyperlink with a video by associating the content reference with coordinates at which the hyperlink appears in the video, wherein one of the coordinates includes time;

(b) transmitting the video from a first content server to a video browser of a user display;

(c) selecting by the user a selected hyperlink in the video by selecting coordinates at which the selected hyperlink appears in the video;

(d) determining the content reference for a new session of the selected hyperlink based on the selected coordinates;

(e) initiating a connection of the browser to the new session of the selected hyperlink; and

(f) switching the connection of the browser from the first content server to the new session.

2. (original) The procedure of claim 1, wherein said step (b) further comprises transmitting a link stream to the browser in parallel to the video, the link stream including the content reference for the at least one hyperlink when the at least one hyperlink is displayed.

3. (original) The procedure of claim 2, wherein said step (d) comprises determining, by the browser, the content reference based on the information received via the link stream and the coordinates selected in said step (c).

4. (original) The procedure of claim 1, wherein said step (e) is performed prior to step (c) such that said step (f) is performed as a smooth switchover when the hyperlink is selected in said step (c).

5. (original) The procedure of claim 1, wherein said step (d) comprises looking up the content reference in a database in the current content server based on the coordinates selected in said step (c), the database including the content reference cross-referenced with the coordinates at which the at least one hyperlink for the content reference appears in the video.

6. (original) The procedure of claim 1, further comprising the step of downloading a file from the current content server to the browser before performing said step (b), the file containing a database including the content reference cross-referenced with the coordinates at which the at least one hyperlink for the content reference appears in the video and said step (d) comprises looking up the content reference in the downloaded file based on the coordinates selected in said step (c).

7. (original) The procedure of claim 1, wherein said step (e) further comprises initiating at a call processing server a connection to the new session of the selected hyperlink, the call processing server being arranged between the current content server and the browser.

8. (original) The procedure of claim 7, wherein said step (e) is performed prior to step (c) such that said step (f) is performed as a smooth switchover when the hyperlink is selected in said step (c).

9. (original) The procedure of claim 1, wherein said steps (d), (e), and (f) are performed using a switchover application associated with the video in the current content server.

10. (original) The procedure of claim 9, further comprising the step of downloading the switchover application containing information on the at least one hyperlink in the video being transmitted in said step (b).

11. (original) The procedure of claim 10, wherein said step of downloading a switchover application is performed prior to said step (b), and said step (b) comprises establishing a multimedia session, by said switchover application, with the current content server and requesting transmission of a link stream including content reference for the at least one hyperlink.

12. (original) The procedure of claim 10, wherein said step of downloading a switchover application is performed at a given time displacement from the start of the video in said step (b).

13. (original) The procedure of claim 10, wherein said step of downloading a switchover application further comprises downloading a first switchover application and a second switchover application such that the first and second switchover applications are active simultaneously.

14. (original) The procedure of claim 9, wherein the switchover application performs at least one of the following steps:

downloading given contents at given points in time;

playing contents at given points in time;

checking content server availability;

selecting from several content servers depending on server load status;

requesting the current content server to prepare a content for transmission;

requesting the current content server to start transmitting a prepared document;

requesting the current content server to start transmitting content from a given displacement;

requesting a downloading of a new switchover application for the content referred to by a link;

establishing a new session to new content at given points in time;

submitting received call processing language scripts to assist establishment of a new session;

determining round trip delay between the browser and the content server of the selected hyperlink and adjusting switchover times on the determination;

determining permanent terminal or terminal location specific implications to general session establishment time and adjusting switchover schedules based on the determination;

performing procedures needed to join a multicast session;

reserving network resources for a new session under establishment or a link or data stream being resumed;

freeing network resources for a new session being cleared or a link or data stream being paused;

performing video/audio content switchover at a given point in time;

comparing link descriptive information with user preference attributes and browser capabilities, in case of failure to satisfy the preference attributes; and

cancelling the visualization of the link to the user in case of failure.

15. (original) The procedure of claim 14, wherein said step (f) comprises maintaining a session to the first content server and the switchover application performs the following steps:

establishing a new session toward the content of the selected hyperlink at a given point in time;

pausing the video/audio content stream of the original content at said step (f);

resuming the video/audio content stream of the original content at switchover back to the original content; and

releasing the new session toward the content of the selected hyperlink after switchover back to the original content.

16. (original) The procedure of claim 15, wherein said step of resuming the video/audio content stream of the original content including resuming at the point in the original content at which the original content was paused.

17. (original) The procedure of claim 15, wherein the switchover application caches a history of switchover applications.

18. (original) The procedure of claim 3, wherein said steps (d), (e), and (f) are performed using a switchover application associated with the video in the first content server, said step of transmitting a link stream comprises transmitting a link stream including link selection and switchover preparation schedules, said switchover preparation schedules specified in ascii tag notation such that said switchover application performs the step of interpreting said ascii tag notation.

19. (original) The procedure of claim 1, wherein said step (d) includes using an algorithm that determines the location of a hyperlink based on visual characteristics in the video.

20. (original) The procedure of claim 1, wherein the browser performs at least one of the following steps:

downloading given contents at given points in time;

playing contents at given points in time;

checking content server availability;

selecting from several content servers depending on server load status;

requesting the current content server to prepare a content for transmission;

requesting the current content server to start transmitting a prepared document;

requesting the current content server to start transmitting content from a given displacement;

requesting a downloading of a new switchover application for the content referred to by a link;

establishing a new session to new content at given points in time;

submitting received call processing language scripts to assist establishment of a new session;

determining round trip delay between the browser and the content server of the selected hyperlink and adjusting switchover times on the determination;

determining permanent terminal or terminal location specific implications to general session establishment time and adjusting switchover schedules based on the determination;

performing procedures needed to join a multicast session;

reserving network resources for a new session under establishment or a link or data stream being resumed;

freeing network resources for a new session being cleared or a link or data stream being paused;

performing video/audio content switchover at a given point in time;

comparing link descriptive information with user preference attributes and browser capabilities, in case of failure to satisfy the preference attributes; and

cancelling the visualization of the link to the user in case of failure.

21. (original) The procedure of claim 20, wherein said step (f) comprises maintaining a session to the first content server and the browser performs the following steps:

establishing a new session toward the link content at a given point in time;

pausing the video/audio content stream of the original content at said step (f);

resuming the video/audio content stream of the original content at switchover back to the original content; and

releasing the new session toward the content of the selected hyperlink after switchover back to the original content.

22. (original) The procedure of claim 21, wherein said step of resuming the video/audio content stream of the original content including resuming at the point in the original content at which the original content was paused.

23. (original) The procedure of claim 21, wherein the browser caches a history of switchover applications.

24. (original) The procedure of claim 1, wherein said step (b) comprises transmitting the video from a current content server to a video browser of a user display via a media proxy controlled by a call processing server.

25. (original) The procedure of claim 24, further comprising the step of downloading a switchover application to said call processing server or a service control means connected to said call processing server, said switchover application containing information on links in the video being transmitted in said step (b).

26. (original) The procedure of claim 25, wherein said step of downloading a switchover application is performed prior to said step (b), and said step (b) comprises establishing a multimedia session, by said switchover application, with the current content server and requesting transmission of a link stream including content reference for the at least one hyperlink.

27. (original) The procedure of claim 25, wherein said step of downloading a switchover application is performed at a given time displacement from the start of the video in said step (b).

28. (original) The procedure of claim 25, wherein said step of downloading a switchover application further comprises downloading a first switchover application and a second switchover application such that the first and second switchover applications are active simultaneously.

29. (original) The procedure of claim 24, wherein the call processing server performs at least one of the following steps:

downloading given contents at given points in time;

playing contents at given points in time;

checking content server availability;

selecting from several content servers depending on server load status;

requesting the current content server to prepare a content for transmission;

requesting the current content server to start transmitting a prepared document;

requesting the current content server to start transmitting content from a given displacement;

requesting a downloading of a new switchover application for the content referred to by a link;

establishing a new session to new content at given points in time;

submitting received call processing language scripts to assist establishment of a new session;

determining round trip delay between the browser and the content server of the selected hyperlink and adjusting switchover times on the determination;

determining permanent terminal or terminal location specific implications to general session establishment time and adjusting switchover schedules based on the determination;

performing procedures needed to join a multicast session;

reserving network resources for a new session under establishment or a link or data stream being resumed;

freeing network resources for a new session being cleared or a link or data stream being paused;

performing video/audio content switchover at a given point in time;

comparing link descriptive information with user preference attributes and browser capabilities, in case of failure to satisfy the preference attributes; and

cancelling the visualization of the link to the user in case of failure.

30. (original) The procedure of claim 29, wherein said step (f) comprises maintaining a session to the first content server and the call processing server performs the following steps:

establishing a new session toward the content of the selected hyperlink at a given point in time;

pausing the video/audio content stream of the original content at said step (f);

resuming the video/audio content stream of the original content at switchover back to the original content; and

releasing the new session toward the content of the selected hyperlink after switchover back to the original content.

31. (original) The procedure of claim 30, wherein said step of resuming the video/audio content stream of the original content including resuming at the point in the original content at which the original content was paused.

32. (original) The procedure of claim 30, wherein the call processing server caches a history of switchover applications.

33. (original) The procedure of claim 1, further comprising the step of performing said steps (d), (e), and (f) for a first new session and performing said steps (d), (e), and (f) for a second new session after said first new session reaches an end, in response to said selected hyperlink.

34. (previously amended) A system for processing a time-dependent hyperlink in a video, comprising:

a first content server comprising a video;

a user input/output device comprising a display for displaying the video and an input device for selecting a position on said display;

a browser arranged for connecting said user input/output device to said first content server;

at least one hyperlink and content reference cross-referenced with coordinates indicating where the at least one hyperlink appears in the video stored in said first content server, said coordinates including display position and time during the video, and said content reference indicating a second content server comprising an electronic document to which the hyperlink is linked;

means for determining when said hyperlink is selected by determining when coordinates at which the hyperlink appears in the video are selected; and

means for switching over a connection of said browser from said first content server to said second content server for user access to said electronic document in said second content server when said means for determining determines that said hyperlink has been selected.

35. (original) The system of claim 34, further comprising means for transmitting a link stream containing said content reference of said at least one hyperlink from said first content server to said browser on a first communication channel and transmitting said video from said first content server to said browser in parallel to said link stream on a second communication channel.

36. (original) The system of claim 34, wherein said means for switching over comprises means for performing a smooth switchover.

37. (original) The system of claim 36, wherein said means for performing a smooth switchover comprises means for initiating a connection of said browser to said second content server before said user selection said at least one hyperlink.

38. (original) The system of claim 37, wherein said content server comprises a switchover application for performing a smooth switchover and said means for performing a smooth switchover comprises a means for using said switchover application.

39. (original) The system of claim 38, further comprising means for downloading said switchover application to said browser before said video is displayed, and said switchover application comprising means for establishing a multimedia session with said first content server and for requesting transmission of a link stream including content reference for said at least one hyperlink from said first content server.

40. (original) The system of claim 38, further comprising means for downloading said switchover application to said browser while said video is displayed.

41. (original) The system of claim 38, wherein said browser further comprises means for running more than one of said switchover applications simultaneously.

42. (original) The system of claim 35, wherein said content server comprises a switchover application for performing a smooth switchover and said means for performing a smooth switchover comprises a means for using said switchover application, and said link stream comprises link selection and switchover preparation schedules specified in ascii tag notation which is interpretable by said switchover application.

43. (original) The system of claim 38, wherein switchover application comprises means for performing at least one of the following steps:

downloading given contents of said first content server at given points in time;

playing contents of said first content server at given points in time;

checking availability of said second content server;

selecting from several content servers depending on server load status;

requesting said first content server to prepare a content for transmission;

requesting said first content server to start transmitting a prepared document;

requesting said first content server to start transmitting content from a given displacement;

requesting a downloading of a new switchover application for a content referred to by a link;

establishing a new session to new content at given points in time;

submitting received call processing language scripts to assist establishment of a new session;

determining round trip delay between the browser and the content server of the selected hyperlink and adjusting switchover times on the determination;

determining permanent terminal or terminal location specific implications to general session establishment time and adjusting switchover schedules based on the determination;

performing procedures needed to join a multicast session;

reserving network resources for a new session under establishment or a link or data stream being resumed;

freeing network resources for a new session being cleared or a link or data stream being paused;

performing video/audio content switchover at a given point in time;

comparing link descriptive information with user preference attributes and browser capabilities, in case of failure to satisfy the preference attributes; and

cancelling the visualization of a link.

44. (original) The system of claim 43, wherein said switchover application comprises means for maintaining a session to the first content server and comprising means for performing the following steps:

establishing a new session toward the content of the selected hyperlink at a given point in time;

pausing the video/audio content stream of the original content when said new session is established;

resuming the video/audio content stream of the original content at switchover back to the original content; and

releasing the new session toward the content of the selected hyperlink after switchover back to the original content.

45. (original) The system of claim 44, wherein means for resuming the video/audio content stream of the original content includes means for resuming at the point in the original content at which the original content was paused.

46. (original) The system of claim 44, wherein said switchover application comprises means for caching a history of switchover applications.

47. (original) The system of claim 34, wherein said content server further comprises a link database.

48. (original) The system of claim 47, further comprising means for downloading said link database to said browser.

49. (original) The system of claim 47, wherein said means for determining when said hyperlink is selected comprises means for querying said link database.

50. (original) The system of claim 34, further comprising a call processing server arranged between said browser and said first content server, said call processing server comprising said means for switching over a connection of said user input/output device from said first content server to said second content server.

51. (original) The system of claim 50, wherein said means for switching over comprises means for performing a smooth switchover.

52. (original) The system of claim 51, wherein said means for performing a smooth switchover comprises means for initiating a connection of said browser to said second content server before said user selection said at least one hyperlink.

53. (original) The system of claim 52, wherein said content server comprises a switchover application for performing a smooth switchover and said means for performing a smooth switchover comprises a means for using said switchover application.

54. (original) The system of claim 53, further comprising means for downloading said switchover application to said browser before said video is displayed, and said

switchover application comprising means for establishing a multimedia session with said first content server and for requesting transmission of a link stream including content reference for said at least one hyperlink from said first content server.

55. (original) The system of claim 53, further comprising means for downloading said switchover application to said browser while said video is displayed.

56. (original) The system of claim 53, wherein said browser further comprises means or running more than one of said switchover applications simultaneously.

57. (original) The system of claim 35, wherein said content server comprises a switchover application and said means for performing a smooth switchover comprises a means for using said switchover application, and further comprising a call processing server arranged between said browser and said first content server, said call processing server comprising said means for switching over a connection of said user input/output device from said first content server to said second content server, said link stream comprises link selection and switchover preparation schedules specified in ascii tag notation which is interpretable by said switchover application.

58. (original) The system of claim 53, wherein said content server comprises means for performing at least one of the following steps:

downloading given contents of said first content server at given points in time;

playing contents of said first content server at given points in time;

checking availability of said second content server;

selecting from several content servers depending on server load status;

requesting said first content server to prepare a content for transmission;

requesting said first content server to start transmitting a prepared document;

requesting said first content server to start transmitting content from a given displacement;

requesting a downloading of a new switchover application for a content referred to by a link;

establishing a new session to new content at given points in time;

submitting received call processing language scripts to assist establishment of a new session;

determining round trip delay between the browser and the content server of the selected hyperlink and adjusting switchover times on the determination;

determining permanent terminal or terminal location specific implications to general session establishment time and adjusting switchover schedules based on the determination;

performing procedures needed to join a multicast session;

reserving network resources for a new session under establishment or a link or data stream being resumed;

freeing network resources for a new session being cleared or a link or data stream being paused;

performing video/audio content switchover at a given point in time;

comparing link descriptive information with user preference attributes and browser capabilities, in case of failure to satisfy the preference attributes; and

cancelling the visualization of a link.

59. (original) The system of claim 58, wherein said content server further comprises means for maintaining a session to the first content server and means for performing the following steps:

establishing a new session toward the content of the selected hyperlink at a given point in time;

pausing the video/audio content stream of the original content when said new session is established;

resuming the video/audio content stream of the original content at switchover back to the original content; and

releasing the new session toward the content of the selected hyperlink after switchover back to the original content.

60. (original) The procedure of claim 59, wherein means for resuming the video/audio content stream of the original content includes means for resuming at the point in the original content at which the original content was paused.

61. (original) The system of claim 59, wherein said content server comprises means for caching a history of sessions.

62. (original) The system of claim 53, further comprising a media proxy connected with said call processing server operative for conducting media transmission between said first content server and said browser.

63. (original) The system of claim 34, wherein said means for determining when a hyperlink is selected comprises an algorithm operative for determining the location of a hyperlink based on visual characteristics of the video.

64. (original) The system of claim 34, wherein said browser comprises means for performing at least one of the following steps:

downloading given contents of said first content server at given points in time;

playing contents of said first content server at given points in time;

checking availability of said second content server;

selecting from several content servers depending on server load status;

requesting said first content server to prepare a content for transmission;

requesting said first content server to start transmitting a prepared document;

requesting said first content server to start transmitting content from a given displacement;

establishing a new session to a new content at given points in time;

submitting received call processing language scripts to assist establishment of a new session;

determining round trip delay between the browser and the content server of the selected hyperlink and adjusting switchover times on the determination;

determining permanent terminal or terminal location specific implications to general session establishment time and adjusting switchover schedules based on the determination;

performing procedures needed to join a multicast session;

reserving network resources for a new session under establishment or a link or data stream being resumed;

freeing network resources for a new session being cleared or a link or data stream being paused;

performing video/audio content switchover at a given point in time;

comparing link descriptive information with user preference attributes and browser capabilities, in case of failure to satisfy the preference attributes; and

cancelling the visualization of a link.

65. (original) The system of claim 64, wherein said browser further comprises means for maintaining a session to the first content server and comprising means for performing the following steps:

establishing a new session toward the content of the selected hyperlink at a given point in time;

pausing the video/audio content stream of the original content when said new session is established;

resuming the video/audio content stream of the original content at switchover back to the original content; and

releasing the new session toward the content of the selected hyperlink after switchover back to the original content.

66. (original) The system of claim 65, wherein means for resuming the video/audio content stream of the original content includes means for resuming at the point in the original content at which the original content was paused.

67. (original) The system of claim 65, wherein said content server comprises means for caching a history of sessions.

68. (original) The system of claim 34, wherein a second content reference and a third content reference are both associated with said at least one hyperlink such that said means for switching over a connection further comprises means for switching over a connection of said browser from said second content reference to said third content reference of said at least one hyperlink after completion of said second content reference is completed.